

[Designation of Document] Abstract

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[Problem] To provide a laser machining apparatus in which three or more beam splits are made incident on one machining lens so that high speed machining can be achieved, and the machining quality (shapes, dimensions, accuracy and straightness of machined holes) is excellent.

[Means for Solution] The optical paths of beams A and B having the same polarization direction are aligned almost in one and the same direction by a total reflection/transmission type beam combining means 31c using a difference in incident angle. After that, the optical paths of the beams A and B and the optical path of a beam C different in polarization direction therefrom are aligned almost in one and the same direction by a polarizing type beam combining means 32. Then, the beams A, B and C are made incident on a machining lens 45.

[Selected Drawing] Fig. 1